

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : **2000-123987**

(43)Date of publication of application : **28.04.2000**

(51)Int.Cl.

**H05B 41/24**

(21)Application number : **10-293938**

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(22)Date of filing : **15.10.1998**

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## (54) DISCHARGE LAMP LIGHTING DEVICE

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a lighting device in a smaller size and at a lower cost, capable of lighting a tubing lamp having severe preheated conditions with a long service life, maintaining a sufficient preheating current in priority while controlling the voltage increase of a smoothing capacitor and easily detecting and controlling malfunction during removal of a lamp and disconnection of filaments.

**SOLUTION:** A discharge lamp lighting device includes a rectifier DB for rectifying an AC power supply AC, a smoothing capacitor C0 for smoothing the output of the rectifier DB via a diode D1, an inverter using the smoothing capacitor C0 as a power supply, a discharge lamp FL having a pair preheating filaments, a first resonance circuit mounted on a supply passage for high frequency output from the inverter to the discharge lamp FL, a return power supply consisting of a portion of high frequency output the inverter and a second resonance circuit consisting of a series circuit of a preheating inductor Lf and a preheating capacitor Cf connected to both ends of the filaments not connected to the first resonance circuit for the discharge lamp FL.

